

the Irish lepidoptera. We shall also not forget Christy Irwin of Ballyvaughan who invited us into his home on a chilly night and introduced us to his peat fire and "the woman" and with whom we discussed Vietnam, the comity of nations and the price of seaweed.

A Checklist of SpHINGIDAE, Hepialidae, Cossidae, Zygaenidae, Syntomidae, Lymantriidae and Arctiidae (Lep.) of Viti Levu, Fiji Islands, with some ecological notes

By GADEN S. ROBINSON

As most schoolboys know, the Fiji Islands are a group of some 400 islands, mostly uninhabited atolls, in the western Pacific, some 1500 miles from both Australia and New Zealand.

Flying on a Boeing 707 from London it takes about 35 hours to reach Nandi International Airport, Fiji's main airport on the largest island, Viti Levu: it took Captain Cook and his contemporaries about two years.

Fiji is a comfortable place; the island of Viti Levu, where my family live, is moderately warm throughout the year, the day temperature rising to about 85 degrees at Suva, the capital city on the south-east coast, and a little higher at Nandi on the west coast. Rainfall at Suva is in the order of 120 inches per year, mostly falling in the wet season from November to March. The island shows a striking contrast; the western side is dry savannah, the lowlands utilised for growing sugar cane, on the whole, poor in insects. The eastern half of the island with perhaps double the rainfall of the west is covered with forest. The island itself is shaped somewhat like the Isle of Wight and is about ninety miles from east to west coasts. It is hilly, rising to 7,000 feet in some places and the interior is mostly inaccessible.

The river deltas are lush grasslands, supporting dairy and rice-farmers. Further on towards the sea, the delta-land degenerates into mangrove swamps; however usually on the coasts there is just clean beach and, extending some way out, the flat coral reef with its startling fauna. The delta-lands, particularly the Rewa delta, produce some of the most interesting lepidoptera.

I was very fortunate in that my father was posted to Fiji under a technical assistance scheme in October 1965. We live in the government 'suburb' (called 'The Domain') of Suva which is a rather charming but parochial city, and I am flown home each school holiday from a boarding-school in Westmorland.

Our work on the lepidoptera of the region began on a serious basis in March 1966 when we installed an m.v. trap in our garden to the infuriation and puzzlement of the neighbours. It soon became clear that the problem of identification and checklisting was not insuperable and we began work on the butterflies and Bombyces and Sphingines in April. We realised fairly quickly that nearly all the lepidoptera were continuous-brooded so we should be able to make a fairly accurate assessment of what occurs in Fiji in the short time available.

The interest in Fijian lepidoptera lies in the isolation of their habitat, the consequently large number of endemic species and the lack of work that has been done on the subject, excepting the study of those species which are of economic importance.

The only collection extant in Fiji is that at Koronivia Research Station where I was working part-time during the summer holidays. This collection is a good guide to the identification of commoner species, and the Bombyces and Sphinges not represented we were able to identify from Seitz's 'Macrolepidoptera of the World'. At this point I would like to thank the staff of Koronivia for their patience in allowing me to use their collection and notes.

The Noctuidae and Geometridae are a different proposition: identification is somewhat difficult and we have had to postpone the publication of lists of these until identification of many of our specimens has been completed by ourselves or the British Museum.

Meanwhile, the following lists represent the species of Bombyces, Sphinges and Rhopalocera my father and I have been able to verify as occurring in Fiji or which are represented and adequately data-labelled in the collection at Koronivia. I have included notes on the ecology of the Sphingidae as being, I think, one of the most universally popular groups, and the only group of lepidoptera from Fiji of which our knowledge of foodplants and ecology approaches completeness.

SPHINGIDAE

1. *Chromis erotus* Cr. *eras* Bsd.
Uniformly common. Larva on *Pentas lanceolata* and *Morinda citrifolia*.
2. *Deilephila placida* Wkr. *torenia* Drc.
Not uncommon—about a dozen have been taken in our m.v. trap in Suva in six months. Foodplant unknown.
3. *Hippotion celerio* Linn.
Uniformly common. Larva on *Colocasia esculenta*, *Colocasia antiquorum*, *Morinda citrifolia*, *Ipomoea aquatica*, *Ipomoea batatas*.
4. *Hippotion velox* Linn.
Fairly common. Larval foodplant is *Alocasia* spp. It shows little variation, but I have taken a specimen with almost uniform pale ochre forewings.
5. *Herse convolvuli* Linn.
Common. Larva feeds on all *Ipomoea* spp. and *Merremia peltata*. Shows much variation. I have taken a specimen normally marked and palely suffused all over with brownish-pink. Dark-suffused ones are not uncommon.
6. *Cephanodes armatus* Roths.
Rarely taken to light. Larvae sometimes found on *Gardenia*.
7. *Theretra pinastrina* Martyn.
Fairly common. Foodplant in Fiji unverified. Seitz gives *Colocasia antiquorum* which is common here.
8. *Macroglossum hirundo* Bsd. *vitiense* R. & J.
Fairly common. Larva feeds on *Morinda citrifolia*.
9. *Psilogramma jordana* B.-Bak.
Rare and confined to Fiji—probably Viti Levu only. There are two specimens in the collection at Koronivia Research Station from Colo-i-Suva (4.vi.1962) and Nanduruloulou (21.xi.1948). I have never taken it. Foodplant unknown, possibly *Clerodendron* spp.

HEPIALIDAE

10. *Phassodes vitiensis* Roths.

COSSIDAE

11. *Acritocera negligens* Bult.

ZYGAENIDAE

12. *Heteropan dolens* Druce (Vunidawa)
 13. *Levuana iridescens* B.-Bak. (Serea)

SYNTOMIDAE

14. *Euchromia creusa* L.
 (One specimen at Koronivia in coll.—No data. No other recent record known.)
 15. *Euchromia vitiensis* Hamp.

LYMANTRIIDAE

16. *Dasychira fidgiensis* Mab.

ARCTIIDAE

17. *Argina cribraria* Cl.
 18. *Nyctemera baulus* Boisd.
 19. *Asota woodfordi* Druce
 20. *Oenonistis entella* Delia F.
 21. *Utetheisa pulchella* L.
 22. *Celama samoana* Hmps.
 23. *Macaduma corvina* Feld. (Lautoka)

Plusia gracilis Lempke at Wicken

By H. C. HUGGINS, F.R.E.S.

When I was recently at Dingle with Mr. E. S. A. Baynes, he kindly showed me Lempke's paper describing *Plusia gracilis* and giving a clear account of the points differentiating it from *P. festucae* L. After reading this and examining the illustrations I was reminded of a short series of *festucae* which I took at Wicken late in June 1913. Till recently I had half a dozen specimens of these, but unfortunately a couple of years ago I wished to find room for some Irish specimens from Dingle, and as I only keep a short series of an insect, I reduced the Wicken ones to two.

When I came to examine these I found that one was *festucae* and the other clearly *gracilis*. As I do not keep duplicates in the ordinary way I put my cast-off specimens into a store box and give them to anyone calling who wants them. In the case of a rather beautiful insect like *festucae*, which is scarce in this district, I remembered giving one or two of these Wicken ones away, but I looked in the duplicate box and found one left, which was also *gracilis*.

Although the number is far too small to admit any safe deduction, the ratio of 2 to 1 does at least suggest that *gracilis* is as common at Wicken as *festucae*. I am endeavouring, without much hope, to trace the three insects I have given away.

Lempke states that *festucae* appear on the wing earlier than *gracilis*; oddly enough my Wicken specimen, a female, was taken on July 2, whilst the two *gracilis* are dated male June 28 and female June 23.